Chapter 9. Environmental Consequences of Implementation

This section of the document assesses known, potential, and reasonably foreseeable environmental consequences related to implementing the INRMP and managing natural resources at Fort Richardson. Section 9.1 addresses implementation of the no action alternative, which reflects the continuation of existing baseline conditions, as described in Chapter 2, and current management protocols listed in Chapters 3–7. Section 9.2 addresses the potential impacts on the affected environments from the proposed management actions. This assessment is organized by resource area (as presented in Chapter 2) and considers implementation of the selected management measures in their entirety, as they are presented in Chapters 3–7. Cumulative effects are discussed in Section 9.3. Implementing the proposed management actions is USARAK's preferred alternative. A summary of the potential environmental consequences associated with the no action alternative and the proposed action is presented in Section 9.4.

Resource areas have been grouped into general categories to facilitate the analysis of the environmental consequences. The following list describes the groupings:

- Soil Resources (landforms, minerals, and soils).
- Water Resources (surface water and groundwater).
- Biological Resources (vascular plants, mammals, birds, fish, frogs, threatened or endangered species or species-of-concern, wetlands, and forest resources).
- Air Quality.
- Cultural Resources (historically significant sites and structures).
- Environmental Justice.
- Protection of Children.
- Cumulative Impacts.

As discussed in Chapter 1, Section 1.8.5, *Description of the Proposed Action and Alternatives*, the EA addresses two alternatives: the proposed action and the no action alternative. Other management alternatives were considered during the screening process, but eliminated because they were economically infeasible, ecologically unsound, of incompatible with the requirements of the military mission. Chapters 3–7 provide descriptions of the methods used to develop management measures for each resource area and the rationale for why certain management measures were selected. Therefore, the analytical framework supporting each resource area is not repeated in this section. This approach supports Army guidance for concurrent preparation and integration of the INRMP and NEPA documentation.

The Fort Richardson INRMP is a dynamic document that focuses on a five-year planning period, based on past and present actions. Short-term management practices included in the plan have been developed without compromising long-range goals. Because the plan will be modified over time, additional environmental analyses may be required as new management measures are developed in the future.

9.1 No Action/Current Management Alternative

Adoption of the no action alternative would mean that Fort Richardson's INRMP would not be implemented and current resource management policies and practices at Fort Richardson would continue "as is." Existing conditions presented in Chapter 2, *Affected Environment*, and existing management practices described in Chapters 3–7 would continue, and no new initiatives would be established.

Potential consequences associated with the no action alternative are listed for each resource area on a relative scale. This scale is defined in Tables 9-1 and 9-2. As shown, no significant or adverse effects

would be expected. Under the no action alternative, the environmental conditions at Fort Richardson would not benefit from the management measures associated with implementing the proposed INRMP, as 30 on-the-ground projects would not be funded or conducted. Expected consequences of the no action alternative for each resource area are presented in Table 9-1.

Table 9-1. Impacts of No Action/Current Management Natural Resources Management on the Environment.

Program	Project	Soil Resources	Water Resources	Biological Resources	Air Quality	Cultural Resources	Environmental Justice	Protection of Children	Cumulative Impacts
Ecosystem Management	Fort Richardson North Post Management	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Fort Richardson South Post Management	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Haines Management	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Tok Management	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Seward Recreation Camp Management	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Eklutna Glacier Training Site	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Gakona Training Site	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
Fire Management	Fire Management	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect

No effect – Actions do no affect resource.
No Known Effect – Actions have no known demonstrated impact in the installation.
Negligible – Impact is not measurable or perceptible.
Moderately Beneficial – Actions have readily apparent beneficial effects.
Beneficial – Actions have exceptional beneficial effects.
Minor Advers – Impact is measureable and perceptable and localized.
Moderately Adverse – Actions cause sufficient impact but are reversible.

No effects on environmental justice would be expected from the no action alternative since existing conditions would continue under this alternative. The primary concern regarding environmental justice and potential environmental effects pertains to dispropotionately high and adverse consequences on children or minority and low-income communities. The no action alternative in itself does not create any advantage or disadvantage for any group or individual, and is not expected to create disproportionately high or adverse human health or environmental effects on children or on minority or low-income populations or communities at or surrounding Fort Richardson. Fort Richardson would address, however, any project-specific issues regarding disproportionate adverse health or environmental effects on children,

minority, or low-income groups should they arise, and would use best environmental management practices to ensure compliance with applicable regulatory requirements.

9.2 Proposed Action Alternative (Preferred Alternative)

Potential consequences associated with the proposed action are evaluated in this section for each resource area described in Chapter 2, *Affected Environment*. Potential environmental consequences associated with implementing the INRMP would result in the effects listed in Table 9-2. Compared to the no action alternative, environmental conditions at Fort Richardson would improve as a result of implementing 30 on-the-ground projects in the proposed INRMP. These proposed natural resource projects are designed to have positive benefit to the environment, as well as to mitigate the intensive use of both the military and recreational users of the land. Overall, the cumulative impact of these proposed actions would be positive. Therefore, the proposed action is the preferred alternative.

Table 9-2. Impacts of Proposed Natural Resources Management on the Environment.

Program	Project	Soil Resources	Water Resources	Biological Resources	Air Quality	Cultural Resources	Environmental Justice	Protection of Children	Cumulative Impacts
Ecosystem Management	Ecosystem Management Plan	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
	Aerial Monitoring Management Plan	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
	Fort Richardson North Post Management	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
	Fort Richardson South Post Management	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
	Haines Management	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Tok Management	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Seward Recreation Camp Management	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Eklutna Glacier Training Site	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
	Gakona Training Site	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
ITAM	LCTA	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	LRAM	Positive Effect*	Positive Effect*	No Effect	No Effect	No Effect*	No Effect	No Effect	Positive Effect
	EA	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect

Program	Project	Soil Resources	Water Resources	Biological Resources	Air Quality	Cultural Resources	Environmental Justice	Protection of Children	Cumulative Impacts
	TRI	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
Watershed Management	Soil Resources Management Plan	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	No Effect	Positive Effect
	Soil and Water Quality Management Plan	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	No Effect	Positive Effect
	Monitor Soil and Water Quality	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Planning-Level Soil Surveys	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Planning-Level Floristic Inventories	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Planning-Level Vegetation Surveys	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Manage Soil and Water Quality	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	No Effect	Positive Effect
	Erosion Control and Streambank Stabilization	Positive Effect*	Positive Effect*	Positive Effect	Positive Effect	No Effect*	No Effect	No Effect	Positive Effect
Wetlands Management	Wetland Management Plan	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Wetlands Monitoring	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Planning-Level Wetlands Surveys	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Wetlands Management	Positive Effect*	Positive Effect*	Positive Effect*	Positive Effect*	Positive Effect*	No Effect	No Effect	Positive Effect
Forest Management	Forest Management Plan	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Forest Inventory	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Forest Management	No Effect*	No Effect*	No Effect*	No Effect*	No Effect*	No Effect	No Effect	No Effect
Fire Management	Fire Management Plan	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Fire Inventory	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Fire Management	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
Fish and Wildlife Management	Habitat Management Plan	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Fish and Wildlife Monitoring	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect

Program	Project	Soil Resources	Water Resources	Biological Resources	Air Quality	Cultural Resources	Environmental Justice	Protection of Children	Cumulative Impacts
	Planning-Level Fauna Surveys	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Fish and Wildlife Management	No Effect	No Effect	Positive Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Habitat Management	No Effect*	No Effect*	No Effect*	No Effect	No Effect*	No Effect	No Effect	No Effect
Endangered Species Management	Endangered Species Monitoring	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Endangered Species Management	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
Special Interest Area Management	Special Interest Areas Management Plan	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Manage Special Interest Areas	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
Pest Management	Installation Pest Management Plan	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
Urban Area Management	Urban Area Management	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	No Effect	Positive Effect
Education, Awareness, and Public Outreach	Natural and Cultural Resources Education and Awareness	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect
Outdoor Recreation Management	Outdoor Recreation Management Plan	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Monitor Recreational Use	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Manage Recreational Use	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Positive Effect

Program	Project	Soil Resources	Water Resources	Biological Resources	Air Quality	Cultural Resources	Environmental Justice	Protection of Children	Cumulative Impacts
Conservation Enforcement	Conservation Law Enforcement	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect	Positive Effect
Decision Support Systems	GIS	Positive Effect	Positive Effect	Positive Effect	No Effect	Positive Effect	No Effect	No Effect	Positive Effect
Natural Resources Implementation	Program Management	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
	Integrated Natural Resource Management Plan	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect

No effect – Actions do no affect resource.
No Known Effect – Actions have no known demonstrated impact in the installation.
Negligible – Impact is not measurable or perceptible.
Moderately Beneficial – Actions have readily apparent beneficial effects.
Beneficial – Actions have exceptional beneficial effects.
Minor Advers – Impact is measureable and perceptable and localized.
Moderately Adverse – Actions cause sufficient impact but are reversible.

* Short term negative effects during construction or project execution from potential erosion. Long term positive effects from repair or management.

No effects on environmental justice would be expected from the proposed alternative since overall resource conditions are expected to improve continue under this alternative. The primary concern regarding environmental justice and potential environmental effects pertains to dispropotionately high and adverse consequences on children or minority and low-income communities. Implementation of the proposed management in itself does not create any advantage or disadvantage for any group or individual, and is not expected to create disproportionately high or adverse human health or environmental effects on children or on minority or low-income populations or communities at or surrounding Fort Richardson. Fort Richardson would address, however, any project-specific issues regarding disproportionate adverse health or environmental effects on children, minority, or low-income groups should they arise, and would use best environmental management practices to ensure compliance with applicable regulatory requirements.

9.3 Cumulative Effects

A cumulative effect is defined as a larger effect on the environment that results from the incremental effects of actions when compounded on top of past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative effects can result from

individually minor, but collectively significant actions taking place locally or regionally over a period of time.

Implementation of the INRMP would result in a comprehensive environmental strategy for Fort Richardson that represents compliance, restoration, prevention, and conservation. Implementation would improve the existing management approach for natural resources on the installation, and would meet legal and policy requirements consistent with national natural resources management philosophies. Implementation would be expected initially to improve existing environmental conditions at Fort Richardson, as shown by the potential for beneficial effects in Table 9-2. Over time, adoption of the proposed action would enable USARAK to achieve its goal of maintaining ecosystem viability and ensuring sustainability of desired military training area conditions.

As described in *Background*, *Responsibilities*, and *Future Military Mission Impacts on Natural Resources* (see Chapter 1) Fort Richardson's training lands, in combination with neighboring lands, can be viewed as a generally stable, well-managed natural system surrounded by areas of varying levels of growth and development. If Alaska is chosen as an Army transformation site during 2002-2006, USARAK will experience a change in its military mission. The impacts of this change may result in the preparation of a Mission/Transformation Environmental Impact Statement for USARAK. This INRMP would be considered in the analysis of the proposed change. Discussions with federal, state, local, and tribal agencies indicated no planned changes in the operation or management of the surrounding lands in the foreseeable future.

Growth and development can be expected to continue outside of Fort Richardson and the surrounding natural areas, and may adversely affect natural resources within the Cook Inlet ecoregion. The generally positive effects of activities associated with the proposed management measures contained in this INRMP, however, would not be expected to contribute to cumulative adverse effects to these resources.

9.4 Findings and Conclusions

The purpose for natural resources management is to have a positive effect on the environment. Based on the analysis in this chapter, it is concluded that overall, the proposed natural resources management will produce a positive effect on the environment. There will be some short-term negative impacts, however, while projects are being conducted, but these will not significantly affect the environment. The same projects that may produce short-term impacts will result in long-term positive impacts.

The proposed action to implement the INRMP for Fort Richardson was analyzed by comparing potential environmental consequences against existing conditions. Findings indicate that, under the preferred alternative, potential consequences would result in either no significant adverse effects or only beneficial effects on each resource area (see Table 9-2). Proceeding with the preferred alternative would not significantly or adversely impact the affected environment. Additionally, the actions in the preferred alternative should not contribute to cumulative effects.

Based on this EA, implementation of the proposed action would have no significant environmental or socioeconomic effects. Because no significant effects would result from implementation of the proposed action, preparation of an EIS is not required, and preparation of a Finding of No Significant Impact (FNSI) is appropriate.